2. PROJECT DESCRIPTION

The Indiana Department of Transportation (INDOT) plans to increase capacity of 11 miles of I-465 in Marion County, IN from south of SR 67 to south of 56th Street. Alternatives include: 1) doing nothing; 2) Transportation System Management Techniques (TSM); 3) providing for mass transit; 4) expanding certain areas to four lanes in each direction; 5) expanding certain areas to five lanes in each direction; 6) expanding certain areas to six lanes in each direction; 7) interchange modifications; and, 8) mixing elements of the above. The lane additions could be the addition of a full through lane or addition of lanes between two interchanges only, where a lane is added at an entrance, then dropped at the next exit. This is termed an "auxiliary" lane.

2.1 Existing Conditions

I-465 is a 53-mile circumferential beltway of the Indianapolis area. This segment of the west leg, approximately 11 miles of I-465 between south of the SR 67 interchange (Exit 8) to south of the 56th Street interchange (Exit 19), was built in the late 1950s and early 1960s on the fringe of the urban area. Development along the corridor occurred relatively quickly after I-465 opened.

Interstate 74 (west leg) travels over I-465 between the southern limit of this study and Exit 16 where it departs to the west. I-70 crosses I-465 in the south study area. I-465 now has three through-lanes in each direction, with the exception that four lanes are provided in each direction between SR 67 and I-70 and four lanes are provided in the southbound direction between US 40 and the Airport Expressway.

An overall lack of north-south local roads in the area with any degree of continuity results in I-465 having high traffic volumes. A study by Pflum, Klausmeier and Gehram Consultants, Inc., in 1999 forecast that 90 percent of the traffic that enters the study area exits I-465 before the end of the study area. As one of the first interstates constructed in Marion County its geometrics are less than desirable by today's standards. The roadway does not meet the current design standards for shoulder widths; interchange ramp acceleration, deceleration, and taper lengths; clear zone and barrier requirements; and vertical curves. In addition to this the base concrete layer of the roadway is 34 to 41 years old. It has widespread distress and would be replaced at the same time as the addition of lanes to minimize traveler disruption.

I-465 serves local and regional traffic needs for the Indianapolis area and Indianapolis International Airport. But most significantly, it is an interstate highway and so has national significance. Along the west leg under study, it serves to both collect and distribute long-distance national traffic as well as serving the Indianapolis region. When this segment of I-465 was completed in 1961/62, the roadway featured only two lanes in each direction, although the mainline bridges were built at that time to accommodate three lanes in each direction. The third travel lane was added in the median in 1966/67. The roadway has 12-foot lanes and was built to a design speed of 70 miles per hour. Access is at interchanges only (full access control). The maximum grade over the length of the roadway is three percent. The existing right-of-way is typically 200 feet but expands to 260 feet in certain areas. The posted speed limit is 55 miles per hour. The interchanges in the current study from south to north are: SR 67 (Kentucky Avenue), I-70, Airport Expressway, US 40 (Washington Street), US 36 (Rockville Road), 10th Street, I-74/US 136/Crawfordsville Road, and 38th Street.

The north project limit was set by considering that the 56th Street interchange would best be included in a separate study that incorporates the I-465/I-65 interchange. The 56th Street interchange will be included in a study with the I-465/I-65 interchange because any change in access at the 56th Street interchange will affect operations at the I-465/I-65 interchange. Currently this is a partial interchange and there are no ramps on the north side of 56th Street to or from the I-465/I-65 interchange.

2.2 Preferred Alternative

Tables 2-1 through 2-3 and Figures 2-1 and 2-2 compare existing conditions with the characteristics of the Preferred Alternative. See Figure 1-3 for the configurations of the existing and the proposed interchanges.

Table 2-1
Existing Interchange Characteristics

Location	Type	Additional Information
SR 67 (Kentucky Avenue)	Folded Diamond	Folded to the southeast (Railroad on northwest side)
I-70	Semi-Directional	Directional ramp from NB I-465 to WB I-70
Airport Expressway	Semi-Directional	Directional ramp from SB I-465 to EB Airport Expressway
US 40 (Washington Street)	Cloverleaf	
US 36 (Rockville Road)	Cloverleaf	
10th Street	Semi-Directional	Directional ramp from WB 10th St. to SB I-465; SB C/D[a]
I-74/US 136/Crawfordsville Road	Cloverleaf	
38th Street	Partial Cloverleaf	Loop in NW quadrant only (WB 38th St. to SB I-465)

[a] C/D means "collector/distributor road". These roads are designed to keep merge and diverge activity separate from the mainline flow. This means using a concrete safety barrier to hold C/D traffic apart from the mainline.
Source: INDOT

Table 2-2
Future Interchange Characteristics

Location	Type	Additional Information
SR 67 (Kentucky Avenue)	Folded Diamond	Folded to the southeast (Railroad on northwest side)
I-70	Semi-Directional	All directional except loop ramp from SB I-465 to EB I-70
Airport Expressway	Semi-Directional	Directional ramp from SB I-465 to EB Airport Expressway
US 40 (Washington Street)	Partial Cloverleaf	Loops in northwest and southeast quadrants
US 36 (Rockville Road)	Partial Cloverleaf	Loop in SE quadrant only (EB US 36 to NB I-465)
10th Street	Partial Cloverleaf	Loop in SE quadrant only (EB 10th St. to NB I-465)
I-74/US 136/Crawfordsville Road	Semi-Directional	Directional ramp from NB I-465 to WB I-74
38th Street	Partial Cloverleaf	Loops in northwest and southeast quadrants

Source: TCG and INDOT

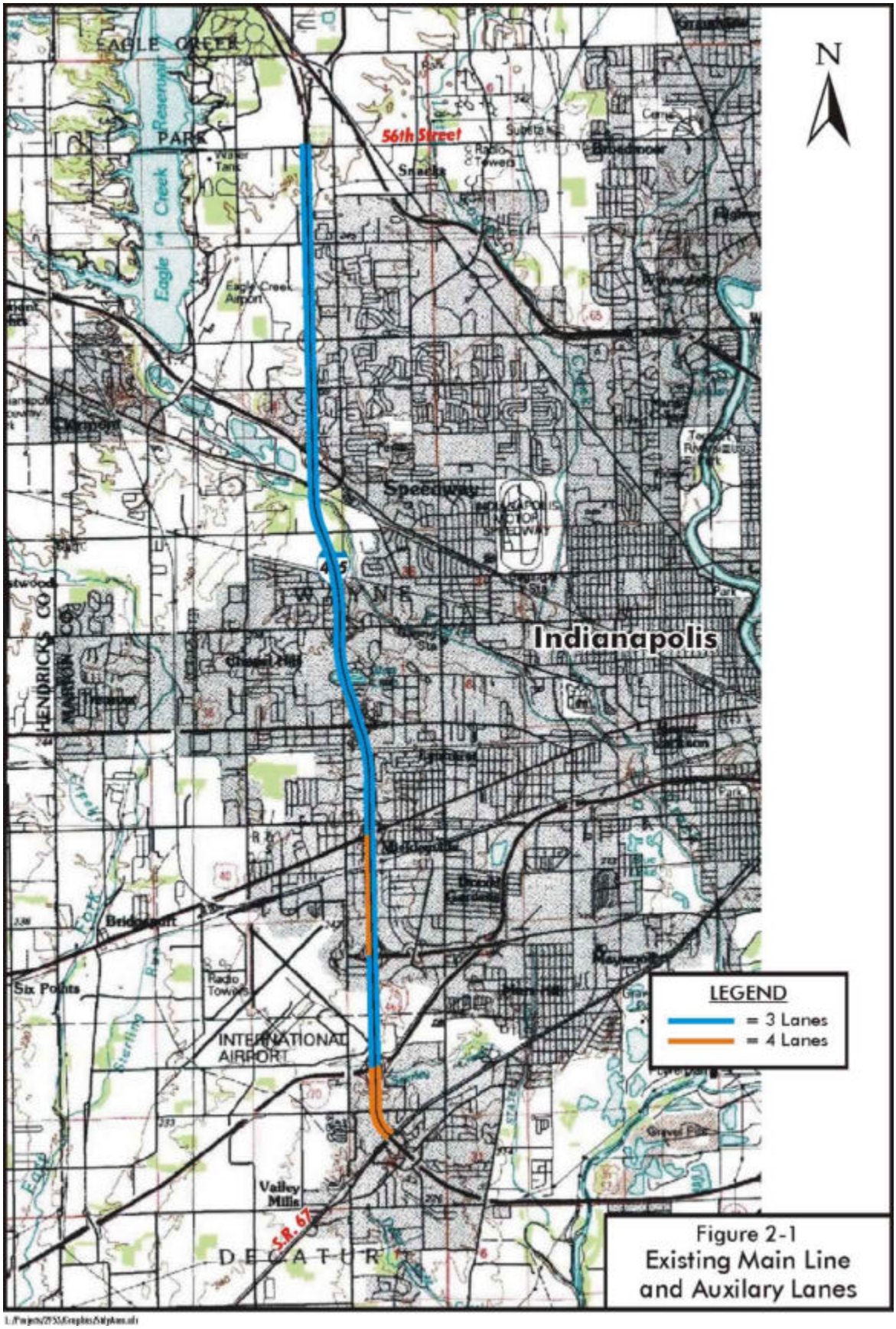

Figure 2-1
Existing Main Line and Auxilary Lanes

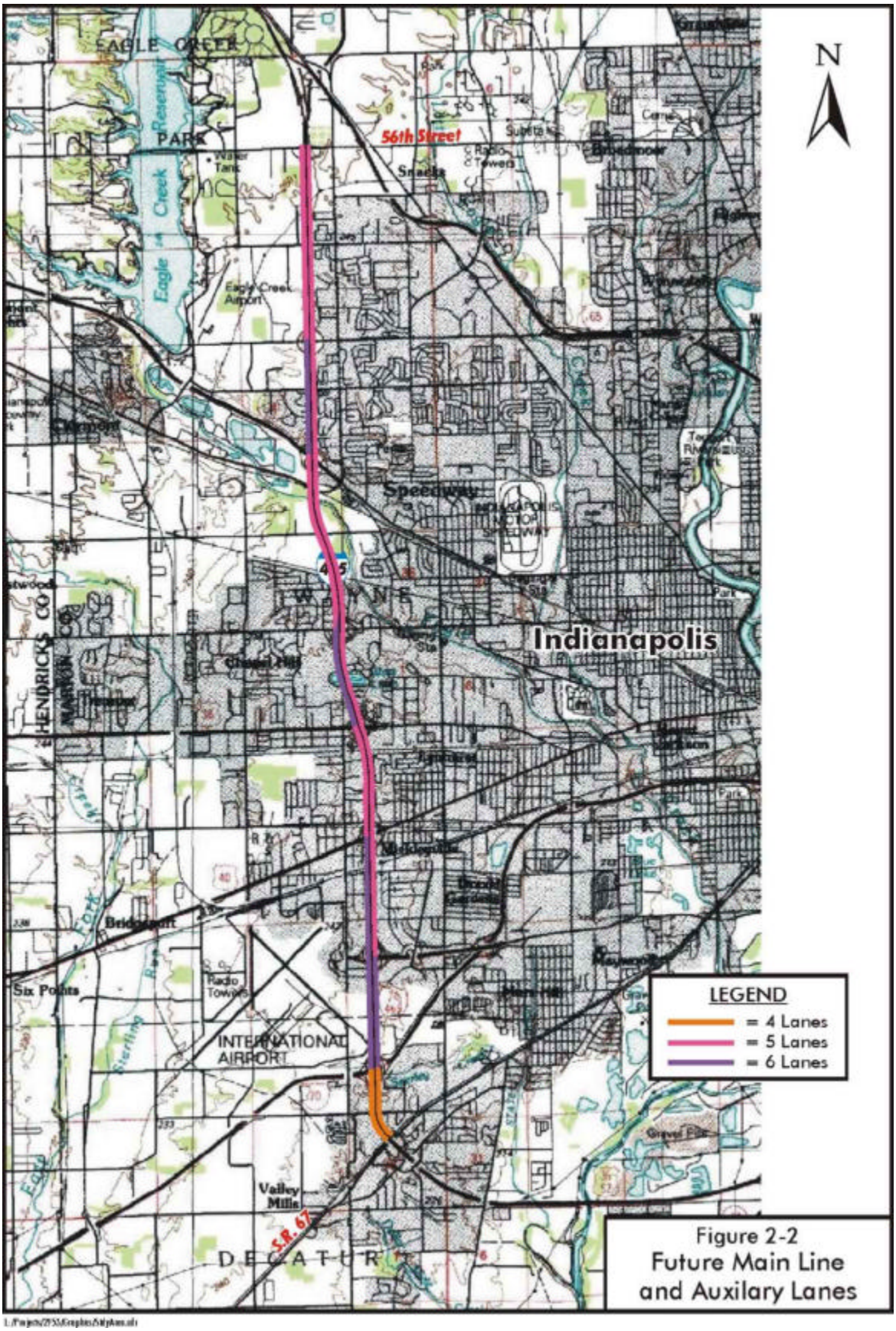

Figure 2-2
Future Main Line
and Auxilary Lanes

Table 2-3
Travel Lanes by Segment
(main line + auxiliary)

Location	Existing Lanes		Future Lanes	
	NB	SB	NB	SB
SR 67 to I-70	4	4	4[a]	4[b]
I-70 to Airport Expressway	3	3	6	6
Airport Expressway to US 40	3	4	5	6
US 40 to US 36	3	3	5	5
US 36 to 10th Street	3	3	5	6
10th Street to I-74	3	3	5	5
I-74 to 38th Street	3	3	5	6
38th Street to 56th Street	3	3	5	5

[a] In addition to these lanes there will be four C-D lanes on I-465 NB between SR 67 and I-70.
[b] In addition to these lanes there will be three C-D lanes on I-465 SB between SR 67 and I-70.
Source: INDOT and The Corradino Group

With the preferred alternative, the LOS on the mainline and auxiliary lanes would range from LOS B to LOS D in the AM and PM peak hours. The preferred alternative would meet INDOT and FHWA guidelines for urban areas, which call for a LOS D or better. (See Table 2-4 for the LOS in 2026 for the preferred alternative). The LOS at all of the ramp junctions and the weave areas of the interchanges will range from LOS A to LOS D with the preferred alternative. All of the interchange ramp junctions in weave areas will meet INDOT and FHWA LOS guidelines for the design year of 2026. See Figure 1-3 for the LOS of the interchange areas.

Table 2-4
Projected Mainline Capacity Analysis

Location	No. of Lanes SBL/NBL	Design Year (2026) LOS	
		Preferred Alternative	
	Future	AM Peak SB/NB	PM Peak SB/NB
SR 67 to I-70	4/4	B/B	C/B
I-70 to Airport Expressway	6/6	B/C	C/B
Airport Expressway to US 40	6/5	C/D	C/C
US 40 to US 36	5/5	C/D	D/D
US 36 to 10th Street	6/5	C/D	D/D
10th Street to I-74	5/5	C/D	D/D
I-74 to 38th Street	6/5	C/D	C/C
38th Street to 56th	5/5	C/D	D/C

The basic future typical section will be an urban interstate, with 12-foot lanes and a 26-foot paved median with a concrete barrier. Inside and outside shoulders would be 12 feet. The minimum right-of-way would be 200 feet in a few areas where enclosed drainage will be used to minimize impacts. Areas with typical open drainage would have 250 to 270 feet of right-of-way. Right-of-way needs will

expand in areas of cut and fill and would clearly be more expansive at interchange areas. Allowable grades would be from -3.00 percent to +3.00 percent. Full control of access will be exercised. There are currently 35 mainline, ramp, and overhead bridge structures along I-465. One pair is over Big Eagle Creek, 15 structures cross over railroad tracks and roads, and 18 road structures cross over I-465. The only access to I-465 will be via the eight interchanges from SR 67 to 38th Street.